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THE MACDONALD LASSIE

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ditor: Mark W. Waldron, Ph.D.
lacdonald Reports:
ordon Thomson
ssociate Editor: Tom Pickup
amily Farm, Office of Information,
uebec Dept. of Agriculture
nd Colonization
dvertising Manager: Hib Saunders
roduction-Circulation:
orothy Parsons

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In This Issue

ournal Jottings

have an incurable vice. I can't esist an unusual recipe — clippings, amphlets and magazines on food ill one day force me either to ove to a larger domain or have huge bonfire in the back yard. I an read a cookbook as avidly as ne best English mystery and I ust admit that when time and the udget allow I do try my hand at ome of the recipes in this unruly ollection. But, unfortunately, I ust won't live long enough to try hem all and one of the main easons is that for that special ccasion my culinary mind always onjures up my all-time favourite — tanding ribs of roast beef and 'orkshire pudding with all the rimmings. When the budget won't tretch to a roast for a company neal, then what's better than beef ourguignon or beef stroganoff.

And for plain family fare, pot roast, stew or chili can't be surpassed. And last but by no means least, happiness for me is an all-dressed hamburger.

It seems that my feelings toward beef are far from unique. Despite its high cost — even a soup bone for the dog has a price tag — beef consumption is going up and long range predictions indicate that this trend is going to continue. This is one reason why the Journal feels more than justified in bringing you the article "Beef in Canada — Evolution or Revolution." But there is another, equally important reason for starting the new year off on the subject of beef and that is that eastern Canada must get into beef operations on a much bigger scale. A look at any set of statistics will tell you that the dairying industry in the East is just too large for the market — dairy farmers must consider other alternatives and beef farming should be high on their list of occupations to contemplate. The article in this issue and others that we hope to bring you in succeeding Journals should give you an in-depth picture of the beef industry in Canada.

The next time I say I have "beef" I hope it's standing rib — if you say it I hope it's standing in the feedlot.

Hazel M. Clarke

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Editorial

Economics for the Layman

In recent years, there has been increased challenging of our economic and political systems. Most of this challenging has been channelled through the aspirations of young people. In many cases this challenging has led to a constructive reform of some of our institutions — the sort of student involvement in university life that has characterized the past few years. In other cases, this challenging has involved student riots in Paris, bombings in the United States and political kidnappings in Canada.

In most cases, the focus of this attack is the capitalistic system — or as they describe it — the depersonalized industrial state that wages war to generate business profits at home and abroad. While the hard core activists are a small minority, they can be dangerous in that they exploit the idealism of the majority who, on the whole, are ignorant of the basic principles underlying our present economic and financial system.

But maybe students aren't the only ones who are not being presented with some of the key concepts that form the bases for our democratic system. Many adults express interest in the financial pages of the daily paper but often this interest doesn't get into such problems as wage and price controls, the factors involved in controlling inflation, and the concerns in balancing international trade. Over a period of several years, the degree of ignorance or misunderstanding concerning even the simplest basic economic principles has been glaringly revealed in surveys of both our adult population and high school students.

What then can be done to improve our understanding of the economic factors that influence each and every one of us every hour of the day? One way would be to develop a well-conceived curriculum of economics in schools and for adult education programs.

This should be a specific compulsory subject with sufficient academic standing to be accepted as a qualifying course for University entrance. As part of this, there is an urgent need for more and better texts dealing with economics written especially for Canadians. There is also a need for including economics as a required subject in the teacher training curriculum and early establishment of summer training courses in economics to build up as quickly as possible a pool of competent teachers. There is also a need to include courses in economics for adults as part of high school and university adult and extension programs.

Within society, I know there is often an expression of dubiousness about some of the principles of economics. Despite this, there are a few principles on which economists agree and are ready to share with the rest of society. If these were made available to Canadian high school and university students, they should better understand the complex economic and financial society in which they will shortly be playing an active role. Recent trends in young people's attitudes give a sense of urgency to such a project that we can no longer ignore. I suspect there are a lot of adults in Canada, too, that have a deep, secret desire to really find out why money just doesn't seem to go as far as it used to.

Mark W. Waldron

BEEF IN CANADA

"A recent projection by the U.S.D.A. estimates per capita consumption of beef and veal for 1980 at 130 pounds, an increase of 18 pounds per capita from the 112.1 pound average of 1967-69. All of the increase will be the result of increased beef consumption since veal consumption is projected to decline from 3.6 pounds per capita in 1967-69 to less than two pounds by 1980.

"Thus, rising income levels, population growth, and the increasing consumer preference for more beef, all of which encouraged substantial increases in total beef consumption during the last decade are predicted to continue on this continent during the decade of the 1970s.

"From a consumption viewpoint, the outlook for beef during the 1970s is favorable. Total beef production on this continent will have to increase by an estimated 37 per cent by 1980 to keep up with the predicted growth in beef demand. Increasingly, this rising demand will have to be met from 'new' production; that is, larger beef cow herds, with resulting increases in beef calf crops, as opposed to lower calf slaughter which is approaching a practical minimum, are needed."

Proceedings, Canadian Agricultural Outlook Conference '70.

"Governments and producers should accept as a target the export of 500,000 feeder cattle per year by 1980 and the production of enough beef and veal to meet Canadian consumption demands in full. Federal and provincial programs of research, extension and credit should take this objective into account.

"Canada should initiate discussions to remove all tariffs on cattle and beef in order to achieve a completely free continental market.

"The Canadian Dairy Adjustment Commission should include positive incentives for milk producers to move into beef production."

Report of the Federal Task Force on Agriculture, December, 1969.

There seems to be national and provincial concern about the further development of beef production in Canada. Some governments encourage beef production, some organizations are resisting any attempts to encourage dairy or wheat farmers to change to beef enterprises.

Because of the issues and concerns involved, the Macdonald Journal will feature special articles on beef production during the next four months. Special emphasis will be given to new developments in crossbreeding, to buying and selling feeder cattle and to the organization

EVOLUTION

of cow-calf enterprises. As background to these future articles, Professor Peter Hamilton of the Department of Animal Science at Macdonald was interviewed by the Macdonald Journal.

M. J. We have a great deal of concern in Canada at the present time for the need for increasing beef production. Why is there increased emphasis on beef production?

Prof. Hamilton: First of all the market is the most important factor. It seems that there are surpluses in almost everything in agriculture today with the exception of beef. On this continent at least there is no beef surplus and, in fact, if we are talking about fed beef or higher grades of beef there are many people who feel that it is impossible under any conditions for us to meet the demand in the next 20 years.

M. J. Why is there such an increasing demand for beef?

Prof. Hamilton: Well I think this is one of the real mysteries because I don't think any major food product has ever had happen to it what has happened to beef in the last 25 years. The consumption of beef has increased sharply. And I think it's a very different reason than what we saw with poultry. Poultry made rapid increases at one stage of the game, because of breakthroughs in technology. We have had tremendous breakthroughs in terms of breeding, feeding, management and all aspects of technology in poultry. The same cannot be said in the case of beef. We are still getting only one calf from a cow in a year. We have made some real gains in terms of feed conversion and rate of gain of animals but every piece of beef has to start with a cow and a calf. The facts are that we only get one calf from a cow in a year and this is where the hang up is as far as beef production is concerned. Beef has moved up in price to a greater extent than most food products. The sharp increase in demand has occurred in spite of higher prices. The combination of higher incomes and a highly palatable product has added up to a rapid increase in the consumption of beef.

M. J. It has been suggested by numerous agencies that eastern dairy farmers should be encouraged to move into beef production. What are your ideas on this? Do you think it is possible for a dairy farmer to switch to beef production here in Quebec?

Prof. Hamilton: Yes, I think it's possible. I think it's been questionable whether he could make a viable beef unit or not. I think in the past 20 years that it has been very difficult to make a viable unit in beef out of the average dairy farm in Quebec. I am of the belief that we are moving into a period when the cow-calf operation, as we call it, will become viable on a lot of our farms. I am referring here to the farmer with a cow herd who raises the calves through to weaning. This type of unit has been the most difficult in many respects to show as being viable on anything but the most extensive type of farms, such as the ranches in the West. We have a lot to learn about how to handle beef cows under more intensive conditions.

M. J. Do you think then that we may see the day when Quebec will have a lot more feedlot operations than at the present time?

Prof. Hamilton: That's correct. There are two things happening that make me a bit optimistic about the cow-calf operation. First of all, the price of calves has been increasing and will continue to increase. There is a real demand for calves not only on this continent but all over the world. The production of calves is something that just cannot happen over night. There is a long lag, even when the emphasis is on higher price. We are not going to have any flash increase in calves. The economics of the cow-calf business is such that it's really the price paid for calves that makes the added incentive. In the past, this has been based on very extensive range type of operation with cheap land and practically no labour involved. If we are going to have increases in beef consumption as predicted, then it seems there is no other answer but to pay more to get those calves. In other words they will have to come from farms other than the range country because the range country is all used up now. There is no more cheap land, so these calves have got to come from more intensive production units. Therefore, the price of calves has been moving up and will, I believe, continue to increase. Now as calf prices increase, the cow-calf enterprise in eastern Canada may well become viable on many farms under the right kind of management. So we've got two things happening. First of all we have the price moving up and secondly we have got technology that says that even on our corn farms where we may have

OR REVOLUTION

feeder operation, we can also raise
ne calves. We will have to learn
ow to utilize the by-products,
uch as corn stover and other low
nergy feeds that are not going
o be used to finish steers. A steer
as to have a very high energy feed,
omething the cow doesn't need.

M. J. What will happen if many
airy farmers switch to beef
roduction? Could this lead to a
urplus in beef?

Prof. Hamilton: I can't really feel
here is anything to be afraid of
ere, in that I don't think we are
oing to swamp the market on this
ontinent. In the first place, it will
ake 1¼ million calves more
nnually until 1980 to meet the
redicted 37 percent increase in
emand for beef by that year. Then
here is the huge American market.
ny surpluses are not going to
ood that American market when
ou think about our small production
relation to the U.S.

M. J. The Outlook for '71, for beef
uring the 70s is really the most
vourable of any farm product
day. This raises the issues in-
olved in the development of new
rading standards, of new breeds
nd the type of beef that the
onsumer is going to want.

ross-breeding for instance is
ausing quite a controversy in the
eef industry. What are some of
e things that are going on
resently in the field of cross-
reeding?

Prof. Hamilton: I would say that
here isn't as much happening as
ne might expect to be happening
ith what we know about cross-
reeding. We have plenty of evidence of the advantages of cross-breeding for the commercial beef producer. But there are some problems. When it comes right down to the business of cross-breeding, in many cases the costs of management and labour take away the advantages of cross-breeding. If you can make use of A.I. in a fairly small herd, you can get the advantages of cross-breeding especially if you are producing calves to sell to feedlots.

M. J. The reason for cross-breeding, of course, is really hybrid vigour.

Prof. Hamilton: First of all you have the opportunity of combining the characteristics of two or more different breeds to manipulate the characteristics to obtain what you want. If you have a Holstein, for example, and you want more meat, you can turn to a beef breed and cross it with the Holstein and combine the beef characteristics with the dairy. But when it comes to the cow-calf enterprise it's the hybrid vigour or heterosis in the crossbred cow that provides the real advantage.

M. J. Well, when we talk about cross-breeding, traditionally, we have been thinking of crosses like Holstein-Hereford. The use of traditional breeds is changing, isn't it?

Prof. Hamilton: Yes, there is a real revolution occurring in the beef-breeding business. In the last five to eight years it is unbelievable the number of breeds that have been pouring in, mainly from Europe. If we went back 10 years you wouldn't need more than 10 fingers to count the beef breeds on this continent. Today we have over 30 breeds. New breeds always create a lot of interest and in some cases a lot of dollars too. There is no doubt about it, in some of these new breeds we are getting characteristics that, though I wouldn't say that we don't have them in the traditional breeds, we haven't done a job of bringing them out. Therefore, these new breeds are adding certain traits to our pool of breeding stock on this continent.

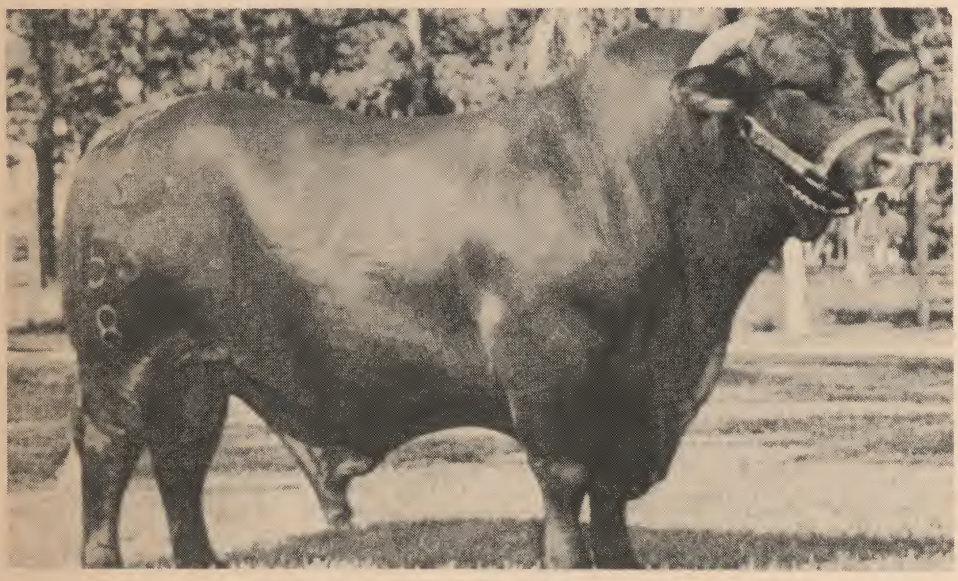
M. J. When you are talking about these new breeds, which ones specifically do you think have the most potential in a cross-breeding program?

Prof. Hamilton: Well, I think you have to think in two steps when you think of this. You have to think in terms of (1) whether you are in the cow-calf business or (2) whether you are in the business of feeding out or finishing cattle. If you are looking for crossbred cows that have high fertility, high calving rate, calves that are born with a lot of vigour, the ability to milk well or to give heavy weight at weaning time, then I think you have quite a wide choice. One of the interesting things about cross-breeding is that in reproductive traits you don't really have to have high performance on both sides of your cross to get it in the crossbred. It is difficult to list off breeds in terms of just what would be best to produce a good crossbred cow. It depends on what size of calves you want and the market you are serving. One important factor, though, the more unrelated the breed, the more hybrid vigour.

You get some hybrid vigour when you cross the British breeds. More when a British breed is crossed with the Charolais or Holstein, and still more when the British breed is crossed with an Asiatic breed such as the Brahman. If you are looking for a breed for a terminal cross, that is mainly to produce calves for the feedlot that are going to market, then the choice of breeds is not so wide. You want high rate of gain, and the kind of carcass that meets the market demands. Five of the top beef breeding specialists on the continent recently pooled their knowledge and experience and named only six breeds for use in their terminal cross. This selection was based on "rapid growth of muscle tissue."

M. J. Which breeds are they?

Prof. Hamilton: Well there is

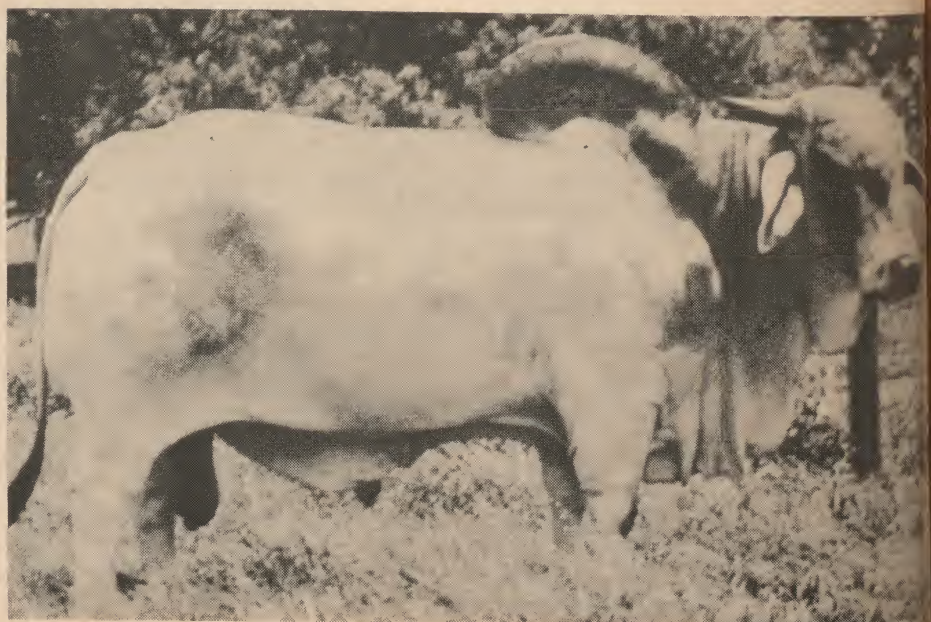


Charolais, Charbray, Limousin, Maine Anjou, Simmental and Santa Gertrudis. Not a single one of our traditional breeds is included.

M. J. What is the reaction then of the traditional breed associations to the use of these new breeds?

Prof. Hamilton: There is certainly a negative reaction on the part of some but on the more positive side the breed associations and breeders themselves think this has done a lot to move them much more rapidly into the business of doing a better job of selection. For example, the test station at St. Hyacinthe is full, and there is a strong desire to measure and select for the economic traits. This should have happened 10 or 20 years ago. We have been very slow on this continent and certainly in eastern Canada in finding out where our better gaining animals are. A lot of stress was put on exterior traits and breed points which had little to do with the economics of beef production. If you attend the annual meetings of breed associations today, it is really quite shocking to find the change that has taken place in them. I think the constructive reaction has been to really get these long established breed associations off their butt and get them moving.

M. J. Let us say a farmer in eastern Canada is interested in introducing some foreign genetic lines into his operation. How is this possible today?



1. Charolais
2. Santa Gertrudis
3. Brahman
4. Limousin
5. Maine Anjou
6. Simmental

M. J. What about breeds like Limousin?

Prof. Hamilton: They are available with difficulty and at considerably higher costs. If you want to mate a cow to one of them, you can usually arrange it. Simmental and Limousin are available in the West and by working through a local unit here you can probably make arrangements.

M. J. But this will change?

Prof. Hamilton: It will change, there is no question, especially if more interest develops in beef. Now, I think this is one of the problems in the East; we just don't produce enough beef in Quebec to make the A.I. stations or anybody else get too enthused about the market. The use of beef breed semen has been increasing and if we really get serious about it I think the A.I. units will do everything they can to make semen available on some of these other breeds.

M. J. This really then is an evolution rather than a revolution in the beef industry?

Prof. Hamilton: Quite right. I don't know what other alternative there is for an awful lot of our farms.

'rof. Hamilton: It is a very good uestion because first of all the ost of buying a sire would probably e so high that it's almost out of the uestion. The one way some of the reeds are available is through A. I. nd I would say that this is where becomes feasible for a man to be ble to use them on a small herd.

ome of these breeds are available nd Charolais is an example. This reed is more available today and s one of the few of these exotic reeds that is available at breeding nits like St. Hyacinthe, Kemptville nd so on.

Traffic Signals for Clothing Care

The Department of Consumer and Corporate Affairs has adopted a system for labelling textile products to show the best methods of washing, bleaching, drying, pressing and dry cleaning. The labels are based on symbols developed by the Canadian Government Specifications Board which defined them in terms of standard laboratory procedures. No words are used, the language is universal. The standards apply to the complete garment or article: the fabric, the trimming, the zipper, the belt, the buttons and the lining. Colours must be fast to running or staining. Fabrics must be dimensionally stable, neither shrinking nor stretching. The label must be permanently attached to the garment — it cannot be lost or mislaid.

The care symbols.

The washtub: washing

The triangle: bleaching

The square: drying

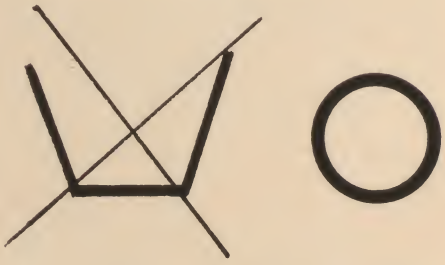
The flat-iron: ironing

The circle: dry cleaning

The colours.

Green: Go ahead, no special care required.
Amber: Proceed with caution, special care necessary.
Red: Stop! Danger!

Care instruction language.



(Red) (Green) Do not wash. Dry clean only.

(Amber) Wash in the washing machine at 100°F. or lukewarm.

(Green) Iron at 400°F. or cotton setting.

(Amber) Lay the article flat to dry.

The care labelling scheme is now a fact, but it is not law. Manufacturers are under no compulsion to use it. Only the force of public opinion and consumer insistence will make care labelling a common practice.

Then, let all consumers write for the free colour booklet which gives the complete care label instruction language. The address is:

Care Labelling For Textiles,
The Consumer,
Box 99, Ottawa.

Ask for care labels on every garment purchased.

Send suggestions for better labels with more information, if this is inadequate, or more easily understood symbols.

If, in spite of labelling, the garment is damaged, report to The Department of Consumer and Corporate Affairs. They are the custodian of the symbols and, even though the labels are not compulsory, any manufacturer who uses them must comply with all the requirements of the Canadia Government Standards Board standards.

Prof. M. M. Jenkins,
School of Food Science.

The Family Farm

Published in the interests
of the farmers of the province
by the Quebec Department of
Agriculture and Colonization

Aid for Artificial Insemination in Agricultural Region 9

This assistance policy by the Department of Agriculture and Colonization is intended to improve herds of dairy and beef cattle in Agricultural Region number 9 (Northwest Quebec) through maximum use of the first-class bulls kept at the Artificial Insemination Centre at Saint-Hyacinthe.

The policy is designed to replace the one entitled "Placement of dairy cows in handicapped regions" and, in view of the high quality of the bulls kept at the A. I. Centre, it should produce much better results.

The assistance consists in payment by the Department of part of the breeding fee for first inseminations made with semen from bulls at the Quebec A. I. Centre at Saint-Hyacinthe.

The farmer must: 1. be a raiser of dairy or beef cattle; 2. be a member in good standing of an established cattle breeding club in region 9; 3. apply to an inseminator of an established cattle breeding club in region 9.

The Sub-centre must pay the Quebec A. I. Centre for the semen required for all the inseminations, first or repeated. The shares of the cost payable by the farmer and by the Department of Agriculture and Colonization are as follows:

Year of operation	Farmer's Share	Dept's Share
First	$3.50	$5.50
Second	4.00	5.00
Third	4.50	4.50
Fourth	5.00	4.00
Fifth	5.50	3.50
Sixth	6.00	3.00

Following verification of breeding certificates by the Quebec A. I. Centre, each established cattle breeding centre in the region will receive a cheque every month for the number of first matings carried out by its inseminators. The amount will then be divided among the inseminators according to the terms of their employment by the sub-centre.

It is understood that cattle breeding clubs will keep $2 of the sum paid by the farmer for administration purposes. The remainder must be turned over to the inseminators.

All request for further information should be made to the Quebec Artificial Insemination Centre, P.O. Box 518, Saint-Hyacinthe, P. Q.

Veal Raising and Dairying Could be a Profitable Combination

"Veal has always been considered a by-product of dairy farming, whereas it could be a very worthwhile source of additional income which could easily be doubled to rank fourth in importance after milk, pork, poultry, and eggs," Mr. Vic. Pelchat, head of the department of Agriculture and Colonization's marketing service, told a group of veterinarians recently.

Mr. Pelchat deplored the fact that only 20 percent of the calves slaughtered in federally inspected abattoirs grade good or choice and the other 80 percent are rated medium or common. He pointed out that in 1969 the average price fetched by medium and common calves on the public market was $30.75 a hundredweight and their weight not much more than 125 pounds — hence the relatively low total returns of $27,881,833 to farmers. Prices for good and choice calves on the same markets in the same year averaged $42.90 a hundred.

Thus if 80 percent of our calves could get into the good or choice grades and if their average market weight could be doubled, they could easily fetch a total of $70,000,000 or about 2½ times their present market value.

After showing that it pays to market good calves and stating that there is a demand for them inside and outside Quebec, Mr. Pelchat advised farmers who really want to make a success of their calf raising to follow these rules carefully: set fixed feeding programs and schedules and have them carried out by one person; pay attention to the health and hygiene of the herd; ensure perfect ventilation of buildings; and temporarily isolate any newly arriving calves brought to the farm for raising. He also reminded his listeners that whitish coloured veal is in most demand and that this can be obtained by feeding calves milk or milk substitute. The least addition of meal or hay will colour the flesh and lead to a lower price for the carcass.

Quebec-Bred Saddle Horses

For the past two years, the Quebec Department of Agriculture and Colonization's Research station at Deschambault has been crossing different breeds of horses with the aim of producing a riding-competition and hunting-type

horse. The basic breed in all these crosses is the French-Canadian, the stallions being mated with Thoroughbred and Standardbred mares.

These experimental matings are being made in order to discover the best crosses for breeding a type of saddle horse which will meet the requirements for both a a hunter and a riding competition horse. The type aimed at should be about 16 hands high, weigh between 12 and 13 hundred pounds, be strong-boned and sound-limbed and show vigour, agility, tractability and docility.

Riding has been steadily growing in popularity for some years now, with the result that it is also becoming an increasingly democratic sport. But in Quebec it is not easy to find saddle horses that will really give satisfaction to the rider; the good ones are mostly imported from other countries. There is no real need for this state of affairs but, to remedy it, horse-breeding will have to be adapted to provide prospective buyers with a moderately priced mount of good quality.

The results of the work at Deschambault will make it possible to lay foundations of a suitable breeding program.

Dairy Farmers to Contribute to Milk Advertising

Quebec's industrial milk producers will henceforth make a special contribution of $0.01 per hundredweight of milk and $0.003 per pound of cream fat, for intensified publicity for dairy products.

This new ruling was adopted by the Quebec industrial milk producers' federation in April and approved by the Quebec Agricultural Marketing Board on September 30.

In passing the regulation, the members of the federation were influenced by the considerable surpluses of dairy products in Quebec and Canada, a decline in consumption — especially in Quebec — and the fact that most of the other provinces are already contributing to a publicity campaign through a national organization.

For its part, Quebec's Coopérative Fédérée recognized that advertizing is an effective way to increase consumption of dairy products and understood that more money should be spent on it but did not consider that payment of an additional levy for this purpose was justified.

The regulation imposing a special deduction for publicity purposes became effective on November 1, being added to the regulations concerning deduction of contributions due from producers subject to the Quebec industrial milk producers' joint plan.

Fur Farming in Quebec

The number of fur-farming enterprises in Quebec has been declining steadily over the past eight years, having fallen from 182 in 1962 to 124 in 1969, according to figures on the raising of fur-bearing animals issued by the agricultural section of the Quebec Bureau of Statistics.

At the same time, the number of animals kept has been almost constantly rising — from 44,357 in 1962 to 59,752 in 1969. The latter total includes 55,622 mink and 4,124 chinchillas.

Outstanding success of Quebec Ayrshire Cattle at Toronto

The popularity and constantly improving quality of Quebec's Ayrshires are now well recognized and even common talk in dairy-cattle breeding circles in Canada.

Their superiority was confirmed once again this fall by the results of contests at the Toronto Royal Winter Fair, where most of the 50 or so exhibiting Quebec breeders were showing in the Ayrshire classes. There were also some Quebec entries, though less successful, among the Holsteins, Jerseys and Guerneys.

Mr. Marcel Bourgeois' Chacook Marquis Gold, from St-Ours in Richelieu county, won the title of grand champion Ayrshire bull, and Meredith Perfection belonging to the Quebec artificial insemination centre was named reserve champion Ayrshire bull.

Earlier, these two Quebec bulls had placed first and second in the class for Ayrshire bulls born between July 1, 1968 and June 30, 1969.

Other Quebec Ayrshires won awards in the class for bulls of this breed born between July 1, 1969 and June 30, 1970 — first prize going to Des Prairies Wel Jupiter owned by Mr. Roger Beaudry of Granby, and Burnside Clan Leader from the R. R. Ness and Sons farm at Howick placing third followed by two other young Quebec bulls.

High awards won by other Ayrshires shown by Quebec breeders included the coveted grand championship for females won by Sous l'Ombre Royal Vermeille, a five-year-old cow owned by Mr.

Lorraine Watt riding on her father's farm at Port Daniel West in Bonaventure county.

aurent Bousquet of Granby, and the eserve championship won by ranbyenne Irène belonging to Mr. ntonio Carrier of Granby. A few inutes earlier these two cows ad won, respectively, first prize the section for five-year-old cows orn before the first of July 1965, nd first prize in the class for hree-year-old females born etween July 1, 1966 and une 30, 1967.

wo other animals from Mr. aurent Bousquet's herd also id well at Toronto, namely Good ak Flashy Ivy, a heifer which ame first among 24 entries in the ection for females born between uly 1, 1967 and June, 30, 1968, nd Sous l'Ombre Stelle Finette hich led the section for dry ows, in which Bonnieshade Primrose 2 owned by Mr. W. R. MacKechnie of Pontiac county placed second.

Committee to Study Blueberry Industry Problems

The Quebec minister of Agriculture and Colonization, Mr. Normand Toupin, has announced the formation of a committee to study problems of blueberry research and marketing in the province.

The members are Mr. Marc Tremblay, secretary of the Saguenay-Lake St. John blueberry producers' federation; Dr. Victorin Lavoie of Laval University's agricultural faculty and director of the St-Léon-de-Labrecque research station; and Mr. Gilles Pinard, forestry engineer, who is coordinator of blueberry lands for the farm development service of the department of Agriculture and Colonization.

Mr. Toupin said that the committee's task is first and foremost to study blueberry production with a view to profitability and to set up the organization needed to safeguard the investment already made in the industry and maintain production. The committee is to submit its report to the agricultural department before April 1, 1971.

The department has made a $4,500 grant to the Saguenay-Lake St. John blueberry producers federation to enable its secretary to take part in the committee's work.

Other organizations involved in Quebec's blueberry industry will also be asked to present their views.

This industry, typical of the Lake St. John region, has grown considerably since 1962. Its production rose from 6 million pounds in 1968 to 8 million in 1969 and to 10.5 million in 1970 (a year in which production dropped in other provinces and blueberry-producing states).

The setting up of this special committee clearly shows that the government intends to spare no effort to make the blueberry industry profitable and thereby ensure a substantial income for the approximately 2,000 families concerned.

Quebec Agricultural Department Takes Part in Royal

The Quebec department of Agriculture and Colonization once again took part in the Toronto Royal Winter Fair — the world's biggest indoor agricultural show — which attracts thousands of visitors annually from all over Canada and even from the United States.

Mr. Robert Bourassa, who was to have opened the exhibition, being busy in Quebec; Lieutenant-Colonel Charles Baker, president of the fair for 1970, took his place and, in a short speech to nearly 10,000 people, read a message from Mr. Bourassa in which the Prime Minister of Quebec expressed his regret at not being able to come to Toronto for an exhibition he considers as an integral part of Canadian agriculture.

The Quebec agricultural department's exhibit at the fair this year drew public attention to the progress made by Quebec in breeding horses suitable for riding competition; vividly coloured photos of the best animals at the Deschambault experimental station stud farm near Quebec City were displayed in part of the stand, accompanied by mannequins in riding habits. Another display showed effects of excess or deficiency of fertilizer and minor elements on different crop plants.

There was also an apparatus in operation showing the various stages in blueberry-wine making. This feature aroused keen interest among visitors — most of whom were not aware that excellent wine can be made from blueberries. A charming hostess was there to convince them.

Quebec at the Agricultural Outlook Conference

Mr. Gaétan Lussier, assistant deputy minister in the Quebec department of Agriculture and Colonization; Raoul Cloutier, temporary assistant-director of its economics service; Vic Pelchat, director of its marketing service; and Louis-Nazaire St-Pierre, head of the livestock improvement service, represented the department at the two-day agricultural outlook conference starting at the government conference centre in Ottawa on November 23. About 300 delegates from farm organizations, agricultural industries and federal and provincial governments took part.

The opening meeting dealt with the general economic situation in Canada and in international trade in relation to Canadian agriculture. In the afternoon, delegates presented reports, mainly on the outlook for different crops, including wheat, feed grains and oilseeds.

On the second day, discussions begun the day before were continued, chiefly about dairy and poultry products, special and horticultural crops, and beef and hog production.

The agricultural outlook conference provided useful information for decisions on agricultural policy and planning and basic data for the Canadian Agricultural Congress beginning November 25.

New Way to Extract Protein from Leaves

Results of a research project*, recently carried out at Laval University which may help to relieve the world's protein shortage, describe a new procedure for extracting proteins directly from the sap of leafy material — in the case alfalfa and clover—with organic solvents, instead of by the method of heat coagulation previously used in England (or by the traditional roundabout and costly system of feeding the forage to animals to turn it into livestock products). Dr. Tao's summary and conclusion of his work are as follows:

"The aim of this investigation was to produce a higher yield of more acceptable protein concentrate from leafy materials. A new preparation procedure was developed. The chemical compositions, dispersibility and nutritive value of the products were also studied.

"Yields of nitrogenous compounds precipitated from alfalfa or clover juice by ethanol or acetone were generally found to increase with

olvent-to-juice ratio, but began
o level off as the ratio approached
. At low ratios (less than 0.25),
thanol seemed more effective but
t higher ratios, acetone was found
o be superior. In practice, a ratio
f 3 was used for both solvents.

Numerous assays showed that
he order of effectiveness of four
ifferent methods in precipitating
itrogenous compounds from plant
uices was consistently as follows:
cetone at a solvent/juice ratio of 3,
thanol at solvent/juice of 3, 5
ercent TCA and heat coagulation.

Nitrogen extractability and
mounts of acetone- and TCA-
oagulable proteins in the juices
eclined as the plants dried in the
eld after cutting. This loss in
ield was only partly overcome by
ttempts to restore the lost
oisture. It was found that the
ore succulent the material when
rocessed and the higher the pH
f the extracted juice the higher
ere the nitrogen extractability
nd the crude protein yield.

Much larger amounts of leaf
rotein concentrates were obtained
rom plant juice by solvent
recipitation, especially by acetone,
han by heat coagulation. The
olvent-precipitates had a fine fluffy
exture, creamy colour and
greeable flavour, whereas the
eat-coagula were granular, dark
reen, and had a grassy odour.

Marked differences in composition
ere found between solvent-
recipitates and heat coagula: the
sh and lipid contents being about
6-17 percent and 1-2 percent,
espectively for the former and
-2 percent and 14-15 percent for
he latter. However, the nitrogen
ontents of the concentrates
btained by various methods did
ot differ markedly.

"Amino acid analyses showed that leaf protein concentrates prepared by solvent precipitation had a favourable balance of amino acids and could be used as a source of high-quality protein, with methionine as the probable limiting factor.

"Of the solvents used, ethanol appeared more effective than acetone in extracting crude fat and removing unsaturated fatty acids from leaf protein concentrates.

"Mineral elements (such as K, Na, Ca, Mg, Fe, P) which are generally considered to have essential physiological functions in animal and human bodies were found in appreciable amounts in leaf protein concentrates prepared by solvent precipitation.

"Solvent-precipitates of leaf protein showed higher relative water dispersibility than heat-coagula. The protein suffered less denaturation during preparation with acetone than with ethanol. The dispersibility of acetone-precipitated alfalfa and clover leaf protein concentrates was found to increase only slightly at high pH values.

"Biological values of the protein concentrates were determined as the protein efficiency ratios and values of 2.01 and 1.41 were obtained for alfalfa and clover acetone-precipitated leaf protein concentrates respectively. Both values were lower than for casein (2.5) but higher than for soybean isolate (1.31) under identical experimental conditions.

"The high yields, favourable chemical compositions, high nutritive values, low colour, excellent flavour and texture of the leaf protein concentrates prepared by precipitation with water-miscible organic solvents as in the present study, are promising attributes which suggest that such concentrates may have an important role to play in relieving the world's malnutrition problems and forestalling impending disastrous famines."

* "A Study of the Preparation, Composition, Properties, and Nutritive Value of Proteins from Leafy Materials" by Michael Tao (Laval University doctoral thesis). Director of Research: Mr. Marcel Boulet, Laval University.

1970 Maple Syrup Yield Lowest in 10 Years

At 1,511,000 gallons (about 20 million pounds) of syrup, Quebec's maple crop in 1970 was the smallest of the past 10 years, according to the department of Agriculture and Colonization's Beekeeping and Maple Products division.

The 1970 crop was 13.9 percent less than the 1969 crop, which in turn was 29 percent less than the yield of 32,380,000 pounds in 1968. The highest yield of the past decade was the record crop of 38,175,000 pounds in 1966. The number of tappings was also smaller, by 2.2 percent, in 1970 than in 1969, namely 17,685,000 as compared with 18,679,000.

The poor yield is attributed by the division to unfavorable weather last spring throughout Quebec and temporary cessation of activities by some producers. Most of those who did not tap this year were discouraged by the lack of demand and poor prices on the market in 1966, 1967 and 1968, when production exceeded requirements.

This Month with the QWI

Most branches reported the enthusiastic attendance by members at the Salon of Food and Agriculture held at Place Bonaventure in Montreal.

Abitibi

Matagami: An interesting roll call was what have you done to interest others in the W. I. The guest speaker, Mr. Jean Desjardin, Mayor of our town, spoke about the Indians and how to improve their conditions. Water pollution also discussed. A book was given to the town library in memory of John Dolan.

Argenteuil

Members held their semi-annual convention at Lachute with guest speakers Mrs. G. McGibbon, Misses Lois Berry and Heather Heatlie. Mrs. McGibbon told of the F.W.I.C. Convention. Misses Lois Berry and Heather Heatlie, Lachute 4-H club members, told of their enjoyable trips during the summer to Alberta and Saskatchewan as participants in International Exchanges. Brownsburg heard Mr. Don Livingstone speak on Adult Education courses available at the Laurentian Regional School. Members planned for Senior Citizens Party to be held in December. At Dalesville-Louisa, a Ways and Means meeting held. Plans made for the Christmas meeting. As is the rule in Frontier, a member received her 25-year pin.. Keen interest was shown in the speaker's (a fireman) topic "Fire Prevention." Jerusalem-Bethany members enjoyed slides of a five week tour of B. C. and Alberta. Lachute heard vivid descriptions of a recent trip to Germany by two of its members. Lakefield signed a petition to the Minister of Roads concerning a dangerous piece of road over which the school bus has to travel. Pioneer heard an interesting talk on the work done for the blind and were advised to take good care of their eyes. Upper Lachute-East End welcomed a new member and saw films on tartan weaving.

Brome

Abercorn assisted a family who lost everything by fire. Welcomed a former member who was visiting in the vicinity. Outfitted a girl for school. Austin gave donations to Quebec Extension Fund, UNICEF, School cafeteria, Butters Hospital, Poppy Wreath and Christmas Party. Heard report on trip to Ottawa. Two former members rejoined.

Chateauguay-Huntingdon

Aubrey-Riverfield: Mr. Earle Templeton, who was born and educated in the community of Howick and is now Principal of the Chateauguay Valley Regional School, spoke on the activities of the school, its function, progress and new developments. Mrs. Osborne Orr reported on the semi-annual convention held at Huntingdon. Donations of $10 each given to the cafeteria in the Howick Elementary School, to the Library, and also to the Retarded Children's Association of the Chateauguay Valley. Dewittville's semi-annual nearly new sale was very successful. Three local students are being awarded scholarships to further their education. The branch is again sponsoring the local skating rink for which a new pump is being purchased. Dundee: Demonstration of bazaar articles and directions for making these was appreciated. Plans were discussed for making a quilt. Hemmingford: The Convener of Health and Welfare conducted a discussion on medicare with all its aspects. Several W. I. members and parents served hot chocolate to approximately 60 children after they finished the UNICEF collection on Hallowe'en. Games were enjoyed by the children. Brought in $121.80 for the fund. Three students prepared and presented a most interesting account of the History of Hemmingford. This together with the mementoes and newspaper clippings which the girls brought to the meeting were greatly appreciated by the members. Another contribution was the reading of a chapter from Heritage of Canadian Handicrafts, dealing with sewing, knitting, braiding ar hooking rugs, and embroidery work. Howick: Mrs. Holmes gave a patriotic address on PEACE. Huntingdon: Thrifty and attractive packaging for Christmas parcels certainly proved to be of great interest. Short articles on the hazards facing our textile industri and the proposed union between the two English-speaking Teacher Unions were given by the Conveners of Economics and Education. Mrs. Hugh Ferguson County President, and a friend were welcome guests at the meeting. Ormstown: Mrs. Ethel Anderson gave an excellent talk on "War and Peace." Jams and jellies were donated to the Barrie Memorial Hospital and the Octob collection went to UNICEF.

Compton

Canterbury: Two films shown, "Food and Famine" and "Unseen Enemies." Projects: Plans made

to send a box of comics to Grise Fiord N.W.T. A birthday party for all members. Holding card parties. Pushing for "Roadside Litter Signs" on highways with fines for those who do not heed the warning! East Angus: Mrs. Wells Coates gave a broadcast on the F.W.I.C. Convention. Held a UNICEF Hallowe'en collection with a party afterwards for the children. Conveners items: Home Economics — Eskimos Need comic books and colouring books. Publicity "Your Safety Attitude." Miss Shattuck spoke about the old schools around East Angus of which she is writing the history.

Gaspe

Dartmouth River: Collected $7 and divided between two schools. Slides were shown by Mrs. Guignon of her trip to southern California. Fair plans made. Gaspe: Plans made to attend annual fair. Gaspe will be Hostess to fair in 1971. Annual dinner held at motel. Murdochville: Suggestions for the 1971 fair brought in. Sold tickets on doll's house. Handed in $30.10. Two new members joined. Wakeham: Each member turned in $3 talent money. Children collected for UNICEF on Hallowe'en. Twenty-one sweaters and an afghan sent to the Unitarian Service Committee. A cup was purchased to give to beginners getting most prizes at the Children's Fair.

Gatineau

Aylmer East branch observed their 45th anniversary. Pictures of Eskimo Women members of W. I. branches in the North West Territories and other slides were shown. Two visitors were present. A letter was read from Mrs. V.R. Beattie, Provincial President. A lively and amusing penny auction was held to make up contribution to the Extension Fund. Purchased a poppy wreath for Remembrance Day Ceremony. A specially decorated birthday cake was enjoyed. Eardley: Served tea and cookies at the Ottawa Winter Fair. Mrs. Ortha Bonshor gave an excellent report of the semi-annual convention of the Gatineau County W. I. Rupert: Three visitors present. Spent $47 on repairs to W. I. Hall. Mrs. Clarence Smith read a poem written by a local lady, Mrs. Dodds, entitled "Heritage". Wright: Motto was, Wholesome Homes are Stepping Stones to a Great Country. Christmas cards for Save The Children Fund sold. Poppies sold.

Megantic

Inverness had a party for the children on Hallowe'en, when $40 was collected for UNICEF. Kinnear's Mills: Letter read from our Provincial President, Mrs. Beattie. Discussed the program for a community Christmas Concert. Inverness members brought in soft toys for Cecil Butters home. Both branches donated to the School Year Book of Thetford Mines High School. The semi-annual meeting was held in Kinnear's Mills, County President, Mrs. Weston Graham, conducted proceedings. Mrs. R. C. Muir, Agriculture Convener, reported in detail on the very successful school fair held with the Megantic County Exhibition.

Missisquoi

Cowansville: Talks, followed by discussions, were given on the following subjects: House plants in winter, the recent municipal elections, a teacher's attitude to her work, the use of credit cards and medicare. Dunham: A successful Tea and Sale was held at which slides were shown of the Battle of Eccles Hill, and a drawing was held on a hand-crocheted afghan. This branch will celebrate its 60th anniversary in January. Fordyce: Recipe books using apples were given out. Poppies sold. Ten dollars was donated to UNICEF. Stanbridge East: A moment of silence was observed for the veterans and Mr. Laporte. Children collected $60.75 for UNICEF. Members were asked to write to their M. P. asking that steps be taken against pollution of our lakes and rivers. Cards were sold to aid the Association of the mentally retarded in Bedford.

Pontiac

Bristol: Mrs. E. Hayes showed pictures of her trip across Canada. Mrs. McWhiter gave a talk on her trip to Scotland. Buying Christmas cards from UNICEF and Save the Children. Entertained county at semi-annual meeting. Bought a wreath and a new flag for Bristol Memorial Park. Clarendon: The Health and Welfare convener gave an interesting talk on the use of drugs, warning everyone to read labels carefully. A food sale planned to raise further funds for hospital work. Heard reports on semi-annual convention. Buying Christmas gifts for patients at Ade Hospital. Mrs. McCord gave a very interesting talk on her trip overseas and told of her visit to Russia and parts of Scandinavia. Fort Coulonge: Heard the address "Women Have Nagging Rights" given by Sister More at F.W.I.C. Convention. Mrs. Colton showed three film strips on timber, minerals, and wheat. Ditty bags sent to Save the Children Fund. Quyon discussed fair exhibits for next year. A demonstration given on the insertion of an invisible zipper by Mrs. Lester McCann. Prizes given to boys and girls who received the greatest number of points at Quyon School Fair. Card party held. Quilt, which was received as a gift, to be raffled. Wyman: Mrs. R. Richardson described her trip, "The Educational Cruise on the Nevasa." UNICEF cards ordered. Plans made for 1971 fall fairs. Pennies for Friendship collected.

Quebec

Valcartier: Two visitors present. Plans made for a euchre party. Donations given to both Protestant and Catholic schools. A donation given to the Brownies and two little girls who were sick were given gifts.

Richmond

Cleveland: Each member bought a poppy. A wreath placed on Cenotaph. A successful pot-luck supper was held at the home of Mr. and Mrs. Kenneth Stevens. Slides shown of interesting places in Florida. Drawing on a quilt held. Donated $10 to county funds, $1 per member to Quebec Service Fund, $10 to Dixville Home for Christmas treats. Membership is to be renewed in C.A.C. Denison Mills: Mystery project proceeds for Sunshine Fund netted 72 cents. Cotton brought in for Cancer Society. Gore: Mrs. Joyce Beaton, Pt. St. Claire, Que., guest speaker on Pollution, followed by a discussion. Plans made for Christmas Party. Sale of Poppies. Plant sent to a member in hospital.

Brookbury W.I. members on the occasion of their 50th Anniversary.

Donated $25 to St. Francis College for hot lunches; $10 sent to county funds, $25 to Quebec Extension Fund. Richmond Young Women: Donated $20 to St. Francis Elementary school for hot lunches, $10 to county funds, $15 to Quebec Service Fund, $10 to Quebec Extension Fund, $5 to Cecil Butters Home. Poppies sold. A bundle of comic books sent to Eskimo children in the North West Territories. Richmond Hill: Two visitors present. The Treasurer's report showed a balance of $734.72. A newsletter from Mrs. R. Beattie was read. Heard report of county meeting. Names were drawn for the exchange of gifts at the December meeting. Donated $17 to the Quebec Service Fund, $7 to Quebec Extension Fund, $25 to county funds. Shipton: Mrs. J. Olney, Convener of Welfare, spoke on cancer and suggested we apply for films on same. A donation made to Federated Charities. Visited the Wales Home. Spooner Pond: Twelve guests from Melbourne Ridge attended. Letter read from Provincial President. Favourable report from Treasurer. Catering to a wedding made a substantial addition to funds. Home Economics Convener made two bun warmers which were auctioned off. Two silver dollars given to two members for first grandchild born and a wedding gift of a blanket was given to a member's daughter. Pennies for Friendship were collected. Tea money collected sent to Quebec Extension Fund. Birthday gift given for boy at Dixville Home.

Sherbrooke

Ascot: Susan Bernard and Nancy Rowe, Rangers who spent two weeks in Mexico during the summer, showed slides and told of their trip. An auction of vegetables and various other items was held in aid of UNICEF. Belvedere: Slides and snaps were shown by a recent bride and groom of their wedding and honeymoon in Germany and other places abroad. Members worked at cancer station and helped decorate a float in the Tombola Parade. Members are working on a rug as a joint project. Brompton Road: Mrs. G. Westman gave an interesting talk on her trip to Germany and Belgium. She showed interesting pictures and coins. Plant slips that were given out in May were brought in to be judged and two prizes given. A member and her granddaughter (Mrs. S. Sayer and Linda Decoteau) portrayed the "Then and Now Homemaking" in the Sherbrooke County W.I. Float in the Tombola Parade. Entertained the East Angus W.I. branch. Several members worked at the Cancer Room. Ways and Means Committee held two successful card parties. Collected Pennies for Friendship. Lennoxville: Mrs. G. Westman gave a delightful talk on her trip to Germany. Jam and jellies were given to the Grace Christian Home. Heard report on school fair. An article on Hallowe'en was read. Wreath purchased for Remembrance Day. An article was read on pesticides. Milby: Mr. Stanley Rowe spoke on Adult Education. The County President, Mrs. Doris Cascadden, was present. Mrs. Catherine Tarte showed slides on the W.I. meeting. Five dollars was given to UNICEF, $3.50 sent to the Quebec Extension Fund. One member, Mrs. Eldora Turner had made her 30th blood donation. Gifts were brought in for cancer patients at Christmas.

Stanstead

Under the terms of the will of Miss Maude Kezar, for many years an active member of the Ayer's Cliff branch, Stanstead County W.I. is to administer a fund of $4,000, the income of which is to be used to help a girl from the county who is pursuing a four-year degree course in Home Economics. Projects: Stanstead North sponsored the Hallowe'en shellout in cooperation with Sunnyside School. Collected $233.37 for UNICEF. Stanstead North has placed in the Canadian section of the Haskell Library a memorial volume containing the names of its 24 founders. Ayer's Cliff plans to send food to a local family where there is illness. Donations: Ayer's Cliff gave a cash donation to the school cafeteria and voted money to purchase articles needed by a friend who is to enter hospital. Both Ayer's Cliff and Stanstead North renewed subscriptions to the Canadian Geographic for their respective schools. Guest Speakers: Mr. Lorne MacPherson, of the MacPherson lumber company of Magog, who has long been active in politics spoke on current events at the meeting in Stanstead North. Through his interest in history, in which he took a degree, he related present conditions with those of the past. At the Ayer's Cliff Branch, Mrs. Irwin Lord showed slides of the Gaspe Peninsula, Prince Edward Island, New Brunswick and Maine.

audreuil

or publicity Harwood Branch vited the new West Island branch hich has been in existence for he year now. We learned of their rojects and talks, etc. This was n evening for exchanging ideas nd learning from each other and as found to be very enjoyable. lans were made for gifts and siting the veterans at St. Anne's ospital for Christmas.

nniversary Celebration

he Gore W.I. met on September 2 in the Ulverton United Church all to celebrate the 50th nniversary of their Institute. A hort business meeting was held ith the President, Mrs. R. Duffy, pening the meeting and 24 mem- ers answering the roll call. ollowing the adjournment of the usiness meeting, members were leased to welcome representatives rom provincial, county, and branch roups who had been invited to hare in the celebrations.

his branch had originally been ormed as a sewing circle. In the utumn of 1920, Miss Roach, uperintendent of the W.I., and Miss Poole, demonstrator of Macdonald College, attended the meeting and the Gore W.I. was rganized at the home of Mrs. inley Nixon with Mrs. Wesley yster as President.

Mrs. Duffy presented corsages to Mrs. V. R. Beattie, Provincial President, Mrs. V. Farant, County President, and Mrs. Coryle Nixon, he only charter member who is still a W.I. member, Mrs. Edith Cook, one of the original members now living in Montreal, Mrs. M. Carson and Mrs. S. Husk who poured tea. Mrs. Jessie Griffith pinned a corsage on Mrs. Duffy.

The program was in charge of Muriel Watt who asked Mrs. W. See to read the branch history. This was followed by the reading of the names of the deceased members and a minute's silence was held in their memory.

Next, several wedding dresses and other costumes of years ago were modelled in a fashion parade. Mrs. Inez Fallona recited The Smack in School. Mrs. Anna Scott danced a Scottish dance. Mrs. Laurel Gunter gave a reading Mothers Day and Mrs. Margaret Coote conducted a musical quiz on selections which were popular years ago.

The hall was decorated with baskets of hydrangea. The head table was decorated with an arrangement of bronze and gold mums with green candles. The birthday cake was made by Mrs. Nelson Wheeler and decorated in white and yellow. Ten small tables with white tea cloths centred with yellow and bronze mums and green candles completed the decorations which were in charge of Mrs. Betty Vogeslander.

Mrs. Beattie was asked to draw the ticket on the knitted afghan and two cushions which had won second prize at the Richmond Fair. These were won by Mrs. Merton Carson of South Durham. Mrs. Duffy, on behalf of the members, presented Mrs. Coyle Nixon with a gold brooch in recognition of her many years as a faithful member.

Lunch was served by several members and a social hour brought to a close a very enjoyable celebration.

F.W.I.C. News

Mrs. H. G. Taylor, who has been National Secretary since 1958, retired at the end of September, 1970. The new National Secretary is Mrs. T. L. Jasper. Mrs. Jamieson will continue as Accountant.

It was passed at the Board meeting that the slide request procedure be simplified. All requests for slides are to be sent to the National Office, Room 28, 46 Elgin Street, Ottawa 4, Ontario, giving exact date of meeting. They are to be returned as soon as possible by registered mail.

Federated News costs 8.3 cents to print, another six cents for postage and envelope. This makes just over 57 cents a year for four issues which are received for 25 cents. All payments for subscriptions are to be sent to the National Office and not to the Editor. Cheques and payments are to be made out to the F.W.I.C. and not to any one person.

A Cause For Celebration

Fifty years ago, Brome County saw the initiation of a rural women's service club. These ladies assumed the role of helpers of the needy, and promoters of better ways of life within their respective communities.

On Wednesday, Sept. 30, the Brome County Women's Institute celebrated its 50th anniversary with its annual general meeting and social gathering held at Glenbrook, near Knowlton Landing. The rally brought back many memories for those of the 119 membership attending as they tried to resurrect the past. Seven of the members appeared in clothing of the early 20s and 30s. Several charter members, Mrs. Pearl Williams, Mrs. Chamberland and Mrs. Allen of Knowlton and Mrs. Susy Patterson of Austin were honoured. No birthday would be complete without a cake, however, and that provided a ceremonial cutting by the organization's three oldest members: Mrs. Traver of Mansonville, who is 93, Mrs. Chamberland and Mrs. Allen of Foster, both past presidents. Few programs could have topped the reading of excerpts from the minutes of the 1920 and 30 era by the ladies in their oldtime dresses. Most colourful of the costumes was that worn by Mrs. J. W. Westover of Sutton, who represented the Provincial Executive of the W.I. Mrs. Westover wore an ankle-length black fitted dress, with boning and inner lining. It had ruffles and lace, and was suitably complemented by the stylish high lace shoes that went with such dresses in its age of vogue.

Even more fun and lots of laughs were heard when the W.I.'s annual auction got underway, with Mrs. Bernice Russell of Sutton waving the auctioneer's gavel. A past-president of the County and Sutton W.I. banch, Mrs. Russell showed the competence and perfected skill of a professional auctioneer, as she managed to bid up a long list of handiwork, cooking and odds and

Left: Mrs. Bernice Russell serves as auctioneer and does handsomely with the gavel, as she bids up the prices on everything. Below: left to right: The oldest member, 94-year-old Mrs. Traver of Mansonville cutting the cake, Mrs. Chamberland of Foster, Past President; Mrs. Hilda Hill, South Bolton, serving President and Mrs. Allen, Foster, also a Past President. Bottom left to right: Mrs. J. Cowan, Mrs. G. F. Knight, County Secretary, Sutton; Mrs. L. Booth, Abercorn; Mrs. M. Burbank, South Bolton; Mrs. E. Bradley, Mansonville, Past President; Mrs. J. W. Westover, Sutton, provincial vice-president; Mrs. D. Lee, Austin.

ends that saw more funds go toward the worthy causes supported by her organization.

Five branches make up the Brome County Women's Institute; Abercorn, Austin, Knowlton Landing, South Bolton and Sutton. President of the five branch organization is Mrs. Hilda Hill of South Bolton; Mrs. G. F. Knight of Sutton, Secretary; Mrs. Donald Patterson, Austin, who is Treasurer and Publicist; and Vice-Presidents Mrs. Douglass Lee of Austin, and Mrs. Maurice Burbank of South Bolton.

Brome County ladies are best known for their support of school fairs, two libraries, bursaries, aid to charity and special health funds like the Cancer Society, UNICEF, UNESCO, Red Cross, and Northern Extension funds. Typical of the good done by these ladies is the library they operate in Magog, where they are loaned space by the City of Magog in the former post office building.

The Brome County W.I. was begun back in 1920, when the late Mrs. Hillhouse of Foster was charter president. At its beginning, the Brome County W.I. was then affiliated with the Quebec Home Maker's Club, which was initiated at Macdonald College. It was recalled by Mrs. Donald Patterson that one such speaker from the College came to the Canterbury, Compton County red school house back in 1919 to tell mothers how they should pack lunch boxes for their children, so as to get maximum nutritious value from the foods they included. As times changed, and various needs arose, the ladies would take on pet projects. One of these indulged in by the Brome County Women, was supporting a girl in the "Save A Child Plan." There were children in Italy who benefited from the Brome ladies' interest, but this project was later dropped, when it was found that too high a percentage of the money sent was going toward administrative costs and far too little of the money actually being used for benefit of the children concerned. Until the change in the regional centralized school system, the W.I. organized and conducted story-hours for boys and girls who had to wait for their respective busses, and at one time they also helped underwrite free lunches and milk for children, whose parents couldn't afford proper lunches. They even helped dress some families who were notably underprivileged.

Fifty years has seen many changes but little drop in enthusiasm. In fact, as it was noted, the group had 103 members in 1920, and 119 today.

The Last Word

The Editor,
Macdonald Journal,
Macdonald College,
Quebec.

Dear Sir,

In the November issue of the "Macdonald Journal," there appeared an article entitled "Pesticides and Heredity" by Dr. W. F. Grant, Genetics Laboratory.

The author no doubt is writing as what he considers a "concerned individual," but it is regrettable that a scientist, even a "concerned geneticist," should so grossly misrepresent the facts in a journal such as yours .

When the above is coupled with the "hysterical" cover portrayal, it seems strange indeed that this should emanate from an institution which claims to be an agricultural one, and which according to recent reports and the "Guest Editorial" in this same issue, is fighting for its existence.

I will not bother to take issue with Dr. Grant's statements on chlorinated hydrocarbons because it is his type of blanket condemnation which has led to the demise of this group of chemicals which could, **when properly used,** be valuable tools in pest control.

The carbamates listed comprise five herbicides and one insecticide, Sevin. The five herbicides are registered for use on the basis of the use pattern resulting in no residue of the chemical in or upon the crop. How can one ingest that which does not exist? Sevin is registered for use on the basis of an established tolerance for residues in or upon the crop, as stipulated by the Food and Drug Directorate. The same holds true for the organophosphates listed.

What Dr. Grant fails to state is what level of each chemical caused the aberrations and other abnormalities mentioned, and then to relate this to the tolerance established for the chemical, or more realistically, to the Average Daily Intake of the Chemical.

The statement is also made that 2, 4, 5-T **is used** to control weeds in wheat, oats and barley crops. This statement is false since these uses are now prohibited. Also, no residues of 2,4,5-T have been detected in any grain product, nor in any food in Canada.

Similarly, it is incorrect to state that 2, 4, 5-T **is used** as a turf treatment on home lawns and golf courses since the product was **removed from store shelves in early 1970,** for use around homes and recreational area. None was allowed for sale for this purpose in 1970.

Dr. Grant also failed to mention that even though 2, 4, 5-T has for many years been used on rangeland and on utility rights-of-way, there is no evidence to show any abnormalities in livestock or their offspring, nor in wild mammalian species, over the years. The Canadian Wildlife Service voiced no objection to use of 2, 4, 5-T.

There are other generalities contained in the article, but sufficient said.

It is my confirmed belief that scientists should be "bounded" by facts, and when writing for public consumption should explain themselves fully. For example, does Dr. Grant not believe that a relationship exists between dosage level and response obtained?

Secondly, is Dr. Grant aware of the data on toxicology required by the Food and Drug Directorate before permission is granted by the Canada Department of Agriculture for sale and use of pesticide chemicals?

Thirdly, is Dr. Grant aware of the continued research into all aspects of toxicology, degradation, etc., that is required even after initial registration?

Fourthly, does Dr. Grant, as a scientist, and as an agriculturist, if one cares to separate the two, believe that the peoples of the world can be fed and their health maintained, without benefit of the use of pesticides?

(continued next page)

I regret to say that after reading Dr. Grant's article, and noting the cover design for the Journal, the most striking feature of both is the singular lack of objectivity displayed. That this should emanate from a so-called agricultural institution is to say the least strange,

Yours very truly,
Michael Nurse

Dr. M. W. Waldron, Editor,
The Macdonald Journal,
Macdonald College.

Dear Dr. Waldron:

Mr. Nurse's letter reminded me of the initial unfavourable reception accorded to a few geneticists who pointed out the dangers of radiation to humans some two decades ago. However, the efforts of the geneticists were fruitful as they were able to secure support which allowed them to initiate more extensive studies in order to determine the extent of radiation hazards. Recently, Dr. W. L. Russell of the Oak Ridge National Laboratory, Oak Ridge, Tennessee, at a **Conference on Evaluating Mutagenicity of Drugs and Other Chemicals** stated that in his long term inheritance studies on the effects of low doses of irradiation that any dose of irradiation no matter how small resulted in the production of mutations. Hence, we can be thankful that some action concerning the potential dangers of radiation was taken in the past.

Now let us consider pesticides. The questions which Mr. Nurse asks do not focus on the real problem. Mr. Nurse is correct in stating that the Food and Drug Directorate require extensive data on toxicology. However, a toxicity test is **not** a test for mutagenicity. A toxicity test does **not** tell us whether a pesticide will cause a heritable change, that is a mutation, in the genetic material which is transmitted to successive generations. We know that certain pesticides are mutagenic in plants and animals and act in a manner similar to that of irradiation causing chromosome abnormalities and producing mutations. We know that more than 45,000 pesticide formulations are registered with the U.S. Department of Agriculture and over a billion pounds of pesticides are being produced annually. And yet, no tests for mutagenicity are required although these tests can be run very cheaply and reliably, at least to the extent of giving a clean bill of health to some, definitely disapproving others which are grossly dangerous, and setting aside a final group for more time consuming and expensive tests before approval. In our laboratory, some pesticides have been shown to be relatively **free** from harmful activity at the commercially recommended dosages, whereas others, with concentrations ¼ to 1/24 the recommended dosages, are greatly harmful.

Out of every 1,000 mutations only 1 is likely to be beneficial to the species. As Professor James F. Crow, a noted geneticist of the University of Wisconsin at the conference referred to in my opening paragraph asked, "Why tempt fate by loading the environment unnecessarily with substances which if they have a mutagenic effect at all, pay off at the rate of 999 to 1 against the human race?"

We do know that tests for teratogenicity (malformed offspring) have only been mandatory since the thalidomide tragedy and that the cancellation of the use of 2,4,5-T for lawns (but not for rights-of-way) was only made last May 14 after abnormal offspring were obtained from mice fed this pesticide. We do know that of all the hospital admissions to children's service 20 percent are now for hereditary defects such as congenital anemia, cystic fibrosis, and mongolism. We do know that the increase in population and the lengthening of our life-span which has been brought about partly through the use of pesticides, the improvements in nutrition and the mastery of infectious diseases, has made it possible for large segments of the population to become older and enter age groups where the slow accumulation of chemicals, or their interactions, become of increasing importance, for example, in the induction of cancer. Thus, the increased trend to systemic insecticides which travel through the plant and subsequently into the food we eat should give us some worry.

Dr. P. H. Abelson in an Editorial in **Science** (30 October, 1970) has stated: "One area that has not received as much attention as it should is pollution by organic chemicals" and he discusses the 2,4,5-T problem referred to in my article. He concludes "We are manufacturing thousands of chemicals. In their preparation, side reactions are producing many thousands of unwanted and even unidentified substances. To what

nt are these strangers being arded into rivers, lakes, and sea? To what extent are such stances finding their way humans? ... Companies ucing fat-soluble, non-egradable, organic chemicals uld give careful attention to question of what they may onsibly set loose on the ronment. Failure to act now surely lead to some new edy, aroused public opinion, harsh federal regulations."
P. Handler, president of the United States National Academy of Sciences has recently asked (**Nature,** 14 November, 1970) "Is it not time to stop frightening the American People and instead demand the very large systematic program necessary to acquire the data which would permit quantitative evaluation of the risks versus the benefits...? We need to know far more about pesticide usage... and the alleged fragility of ecosystems than we do today if we are to make sound judgements and establish public policy."

If the economic benefits of pesticides outweigh their disadvantages, then a small investment by the chemical companies for the screening of pesticides for possible mutagenic properties is a small price to pay for the safeguard of the present and future generations. The know-how is available now.

W. F. Grant,
Professor of Genetics.

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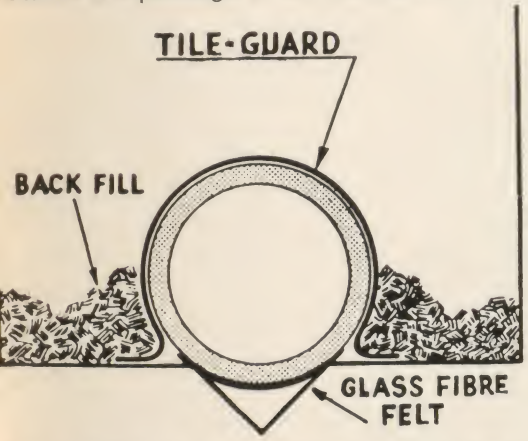

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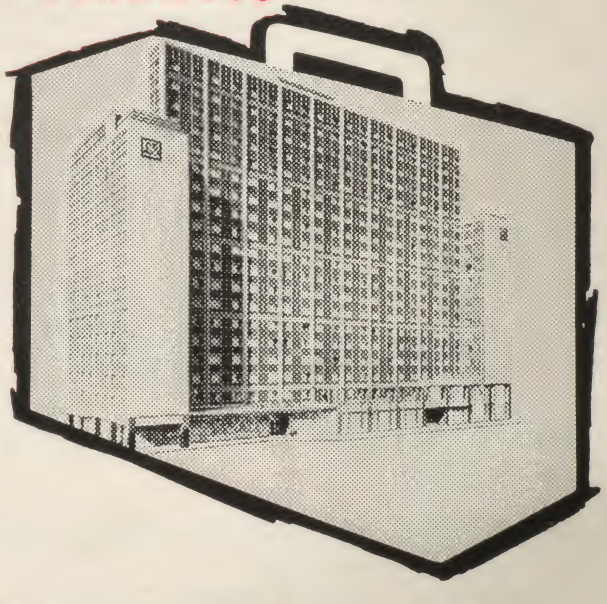

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